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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/737,064	12/16/2003	Raymond Hornback JR.	LOT920030076US1 (030)	5214

46321 7590 03/23/2010
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EXAMINER

PERUNGA VOOR, SATHYANARAYA V

ART UNIT	PAPER NUMBER
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2624

MAIL DATE	DELIVERY MODE
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03/23/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/737,064	Applicant(s) HORNBACK ET AL.	
	Examiner SATH V. PERUNGAVOOR	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments/Amendments

[1] Presented arguments have been fully considered, but are rendered moot in view of the new ground(s) of rejection necessitated by amendment(s) initiated by the applicant(s).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[2] Claims 1, 2, 7, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Queiroz [US 2001/0041017 A1] in view of Boss et al. ("Boss") [US 5,758,110].

Regarding claim 1, De Queiroz discloses the following claim limitations:

A componentized application sharing system [figs. 1 and 2] configured for use with a shared application host (*i.e.* 10), the system comprising: a plurality of different pluggable image processing modules (*i.e.* M1-M4), each of said different pluggable image processing modules (*i.e.* M1-M4) conforming to a corresponding single interface (*i.e.* 118) expected by an application sharing module (*i.e.* communication control unit and 24) [fig. 2; para. 0043], each of said different pluggable image processing modules being selectable to meet requirements of a shared application (*i.e.* image to be transmitted) comprising rendered image frames (*i.e.* image data generated using the scanner)

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of the shared application (*i.e. image to be transmitted*) hosted in the shared application host (*i.e. 10*) and shared between different application sharing viewers (*i.e. 26*) [*paras. 0038 and 0043*]; and, a communicative coupling (*i.e. system bus*) between the application sharing module (*i.e. communication control unit and 24*) and a selected one of said different image processing modules (*i.e. 22*) [*fig. 1 and 2*].

De Queiroz does not explicitly disclose the following claim limitations (emphasis added):

comprising displayed rendered image frames of the shared application hosted in the shared application host and shared between different application sharing viewers and also mouse pointer movements in the shared application hosted in the shared application host;

However, in the same field of endeavor Boss discloses the deficient claim limitations, as follows:

comprising displayed rendered image frames (*i.e. application program displayed on the screen*) of the shared application hosted in the shared application host and shared between different application sharing viewers and also mouse pointer movements (*i.e. mouse pointer on the screen*) in the shared application hosted in the shared application host [*col. 4, ll. 15-35; fig. 2*];

De Queiroz and Boss are combinable because they are from the same field of image transmission.

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of De Queiroz with Boss and apply the method of De Queiroz to displayed image transmissions of Boss, the motivation being to provide fast transmission without significantly sacrificing quality [*De Queiroz; para. 0001*].

Regarding claim 2, De Queiroz meets the claim limitations, as follows:

The system of claim 1, wherein said pluggable image processing modules comprises a plurality of different pluggable image compression modules (*i.e.* M1-M4) [fig. 2; para. 0042].

Regarding claim 7, De Queiroz meets the claim limitations, as follows:

The system of claim 2, wherein said different image compression modules (*i.e.* M1-M4) comprise image compression logic (*i.e.* 104) programmed to produce one of a smallest possible image size to provide a highest possible rate of transmission for a compressed image (*i.e.* M4), a lowest level of image resolution loss to provide a highest level of image fidelity for a compressed image (*i.e.* M1), and a moderate image size (*i.e.* M2 or M3) to provide an intermediate rate of transmission and an intermediate level of image fidelity for a compressed image [paras. 0042 and 0043].

Regarding claims 8 and 10, all claimed limitations are set forth and rejected as per discussion for claims 1, 2 and 7.

[3] Claims 1-4, 8 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roylance [US 2003/0007703 A1] in view of Boss.

Regarding claim 1, Roylance discloses the following claim limitations:

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A componentized application sharing system (*i.e.* 100) configured for use with a shared application host (*i.e.* 118), the system comprising: a plurality of different pluggable image processing modules (*i.e.* 306), each of said different pluggable image processing modules (*i.e.* 306) conforming to a corresponding single interface (*i.e.* 300) expected by an application sharing module (*i.e.* 204) [figs. 1-3; paras. 0020-0024], each of said different pluggable image processing modules (*i.e.* 306) being selectable to meet requirements of a shared application (*i.e.* image to be transmitted) comprising rendered image frames (*i.e.* image data generated using the scanner) of the shared application (*i.e.* image to be transmitted) hosted in the shared application host (*i.e.* 118) and shared between different application sharing viewers (*i.e.* 108, 106, 102) [paras. 0018, 0021 and 0035]; and, a communicative coupling (*i.e.* 300) between the application sharing module (*i.e.* 204) and a selected one of said different image processing modules (*i.e.* 306) [fig. 3; para. 0022].

Roylance does not explicitly disclose the following claim limitations (emphasis added):

comprising displayed rendered image frames of the shared application hosted in the shared application host and shared between different application sharing viewers and also mouse pointer movements in the shared application hosted in the shared application host;

However, in the same field of endeavor Boss discloses the deficient claim limitations, as follows:

comprising displayed rendered image frames (*i.e.* application program displayed on the screen) of the shared application hosted in the shared application host and shared between different application sharing viewers and also mouse pointer movements

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(i.e. mouse pointer on the screen) in the shared application hosted in the shared application host [col. 4, ll. 15-35; fig. 2];

Roylance and Boss are combinable because they are from the same field of image transmission.

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Roylance with Boss and apply the method of Roylance to displayed image transmissions of Boss, the motivation to implement a device that is readily adaptable/modifiable [Roylance: para. 0007].

Regarding claim 2, Roylance meets the claim limitations, as follows:

The system of claim 1, wherein said pluggable image processing modules comprises a plurality of different pluggable image compression modules [para. 0029].

Regarding claim 3, Roylance meets the claim limitations, as follows:

The system of claim 1, wherein said pluggable image processing modules comprises a plurality of different pluggable image capturing modules [para. 0029: integrating].

Regarding claim 4, Roylance meets the claim limitations, as follows:

The system of claim 1, wherein said pluggable image processing modules comprises a plurality of different pluggable image transmission modules [para. 0029: coder].

Regarding claim 8, Roylance meets the claim limitations, as set forth in the discussion for claim 1 and further discloses the application sharing host comprising selection logic

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programmed to select an application sharing strategy ranging from high image fidelity to high speed image transmission [*para. 0029: Any selecting method would fall within this range*].

Regarding claims 10-12, all claimed limitations are set forth and rejected as per discussion for claims 1-4.

[4] Claims 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Queiroz in view of Boss further in view of Shen et al. (“Shen”) [US 6,055,017].

Regarding claim 6, De Queiroz and Boss meet the claim limitations as disclosed in claim 1.

De Queiroz and Boss do not explicitly disclose the following claim limitations:

The system of claim 1, wherein said pluggable image processing modules comprises a plurality of different pluggable image region selection modules configured to process selected image sub-partitions of shared application imagery, each of said different pluggable image region selection modules selecting and ordering processing of said selected image sub-partitions differently.

However, in the same field of endeavor Shen discloses the deficient claim limitations, as follows:

A plurality of different pluggable image region selection (*i.e. 6, 7 and 8*) modules configured to process selected image sub-partitions (*i.e. sub-bands*) of shared application imagery, each of said different pluggable image region selection modules (*i.e. 6, 7 and 8*) selecting and ordering processing (*i.e. scan path*) of said selected image sub-partitions differently (*i.e. horizontal, vertical or zig-zag*) [*figs. 5 and 7*].

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It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of De Queiroz and Boss with Shen to use different scanning directions based on sub-bands, the motivation being to use less bits [*col. 2, ll. 29-40*].

Regarding claim 14, all claimed limitations are set forth and rejected as per discussion for claim 6.

[5] Claims 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roylance in view of Boss further in view of Shen et al. (“Shen”) [US 6,055,017]..

Regarding claim 6, Roylance and Boss meet the claim limitations as disclosed in claim 1.

Roylance and Boss do not explicitly disclose the following claim limitations:

The system of claim 1, wherein said pluggable image processing modules comprises a plurality of different pluggable image region selection modules configured to process selected image sub-partitions of shared application imagery, each of said different pluggable image region selection modules selecting and ordering processing of said selected image sub-partitions differently.

However, in the same field of endeavor Shen discloses the deficient claim limitations, as follows:

A plurality of different pluggable image region selection (*i.e. 6, 7 and 8*) modules configured to process selected image sub-partitions (*i.e. sub-bands*) of shared application imagery, each of said different pluggable image region selection modules

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(*i.e.* 6, 7 and 8) selecting and ordering processing (*i.e.* scan path) of said selected image sub-partitions differently (*i.e.* horizontal, vertical or zig-zag) [figs. 5 and 7].

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Roylance and Boss with Shen to use different scanning directions based on sub-bands, the motivation being to use less bits [col. 2, ll. 29-40].

Regarding claim 14, all claimed limitations are set forth and rejected as per discussion for claim 6.

[6] Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roylance in view of Boss further in view of Jang et al. ("Jang") [NPL document titled, "Performance Evaluation of Scene Change Detection Algorithms"].

Regarding claim 5, Roylance and Boss meet the claim limitations as disclosed in claim 1.

Roylance and Boss do not explicitly disclose the following claim limitations:

The system of claim 1, wherein said pluggable image processing modules comprises a plurality of different pluggable image change detection modules configured to trigger image updates responsive to changes in portions of a shared application image.

However, in the same field of endeavor Jang discloses the deficient claim limitations, as follows:

A plurality of different pluggable image change detection (*i.e.* scene change) modules (*i.e.* 1.1, 1.2 and 1.3) configured to trigger image updates responsive to changes in

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portions of a shared application image [page 841, col. 1, paras. 2 and 3; Sections 1.1, 1.2 and 1.3].

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Roylance and Boss with Jang to select among the different scene change algorithms, the motivation being that each algorithm as a trade off between speed and accuracy [page 842, col. 1, paras. 1 and 2; page 842, col. 2, para. 2].

Regarding claim 13, all claimed limitations are set forth and rejected as per discussion for claim 5.

[7] Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Queiroz in view of Boss further in view of Jang et al. ("Jang") [NPL document titled, "Performance Evaluation of Scene Change Detection Algorithms"].

Regarding claim 5, De Queiroz and Boss meet the claim limitations as disclosed in claim 1.

De Queiroz and Boss do not explicitly disclose the following claim limitations:

The system of claim 1, wherein said pluggable image processing modules comprises a plurality of different pluggable image change detection modules configured to trigger image updates responsive to changes in portions of a shared application image.

However, in the same field of endeavor Jang discloses the deficient claim limitations, as follows:

A plurality of different pluggable image change detection (*i.e. scene change*) modules (*i.e. 1.1, 1.2 and 1.3*) configured to trigger image updates responsive to changes in

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portions of a shared application image [page 841, col. 1, paras. 2 and 3; Sections 1.1, 1.2 and 1.3].

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of De Queiroz and Boss with Jang to select among the different scene change algorithms, the motivation being that each algorithm as a trade off between speed and accuracy [page 842, col. 1, paras. 1 and 2; page 842, col. 2, para. 2].

Regarding claim 13, all claimed limitations are set forth and rejected as per discussion for claim 5.

Conclusion

[8] Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action. \

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Contact Information

[9] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Sath V. Perungavoor whose telephone number is (571) 272-7455. The examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Matthew C. Bella whose telephone number is (571) 272-7778, can be reached on Monday to Friday from 9:00am to 5:00pm. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dated: March 24, 2010

/Sath V. Perungavoor/

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